WATER ALLOCATION PROGRAM DEVELOPMENT
WATER/WASTEWATER SUBCOMMITTEE MEETING

MINUTES OF MEETING
Wednesday, February 5, 2003 2:00-4:00 pm

Members Present: **Members Absent:**
Connie- I am not sure if we passed around a sign up sheet for this meeting…Juan can tell us tomorrow

Guests

I. CALL TO ORDER:
With a quorum present, Mr. Juan Mariscol called the meeting to order at 1:40 PM.

II. APPROVAL OF MINUTES:

III. ITEMS FOR DISCUSSION:

Chairperson Mariscol welcomed the committee members and guests and provided an overview of the goals and general mission of the wastewater subcommittee. He then introduced the three guest speakers:

1. Christian Bratina: of US Filter, Operations Manager of the Cranston WWTF;
2. Steve Goslee: Director of Public Works, Jamestown,
3. Warren Towne: RI DEM, Water Resources Division.

A. Large Scale Wastewater Reuse at a Johnston Power Plant, Christian Bratina

The US Filter Company has a 25-year contract with the City of Cranston to operate the WWTF. A power plant in Johnston needed water for cooling and, in 1999~~;~~, a proposal was signed with Cranston's Wastewater Treatment Facility to supply treated effluent. Treated effluent started being used at this seasonal power plant in November 2002. The power plant receives 5 mgd of effluent in the months that it operates (summer and January-March). A sewer line was installed because of the 5 mgd pumped to the power plant, 10-20% (approximately 0.9 mgd) must be returned for treatment at the WWTF the impact of which is negligible for the WWTF. The rest of the effluent supplied evaporates. Twelve miles of cross-boundary return and supply lines, ranging in diameter from 12-18 inches, were installed. The effluent is super-chlorinated so the water quality is good. Due to lack of reuse guidelines in the state, the DEM drafted regulations for the power plant (5 mg/l TSS). An additional filter building was ~~built~~ constructed at the power plant to provide 5 mg/l TSS. Meeting these guidelines did not alter the WWTF's treatment methods as the facility must meet the pretreatment standards no matter where the water is piped following treatment.

Issues have arisen with regards to:

- Pipe Flows: The flushing velocity had to be increased from 2 ft/sec. to 3 ft/sec.
- Odor: The return line is not vented and follows the contours of the ground, which can lead to odor problems. Odor mitigation can be severe and costly (such as adjusting the pH). The power plant controls odor with bioxide, costing the plant approximately $35,000/year.
- Corrosion: Hydrogen Sulfide and plastic pipes can prevent corrosion.
- Increased Sewer Capacity: With the addition of the 12-mile return line. Sewer capacity is no longer a limiting factor ~~New~~ for new commercial, industrial, and residential development and sewer tie-ins because ~~sewer capacity is no longer a limiting factor with the addition of the 12-mile return line.~~
- Supply and Return Lines: Lines were located 12" to 18" apart. When the sewer line ruptured water spewed five feet in the air.
- Capital Investment: The total invested in this project is unknown.
- User Rates: These are also unknown.

Recommendations for Future Reuse Projects:

- Start with a clear contract that o~~,~~utlines the goals and responsibilities of those involved (i.e. who will fund repairs, etc.).
- Address planning goals ~~with regard to an~~and issues related to increased sewer capacity.
- Determine whether the rates will be a fixed annual rate or a per gallon charge.

General Information:

- Inquiries about tying into the wastewater supply line have come mainly from golf courses.

B. Small Scale Reuse at the Jamestown Municipal Golf Course, Steve Goslee

In the mid-1990's the Town of Jamestown purchased the 9-hole golf course. The course was leased to a private operator who realized that the irrigation pond would run out June of the year it was leased. The Town decided to explore the feasibility of reusing treated wastewater from the Jamestown WWTF. Again, the DEM had to craft regulations for the effluent, these are 10 for BOD and 8 for TSS. A buffer zone for spraying the effluent was established as well. The Aquafund Agency provided demonstration grants in the amount of $125,000. Although the elevation of the golf course is 5 ft. below that of the WWTF, gravity supply was not sufficient. The supply line is high density polyethylene, which can freeze and thaw. In the first years the supply was hooked into the existing irrigation infrastructure until the system was replaced. In the summer months, the course can take up to 75-100% of the WWTF's effluent. The costs were estimated between $2,000-3,000/year. There are no odor problems, it is 100% residential waste.

General Information:

- Addressing public perception and concern of the practice is a must. The Town received a lot of help from the DPH for education and promotion efforts and the neighbors and golfers all supported the project. The golf course invested extra money for motorized quiet submersable pumps for night irrigation.
- Water is thought to inhibit the growth of undesired fungus.

The main deterrent of more projects seems to be distances from the treatment plants and the price of supply line installation- however water shortage in recent years has diminished these costs.

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C. DEM Regulations and Perspective, Warren Towne

The DEM is in the process of developing guidelines for wastewater reuse. These guidelines will be necessary as the interest and complexity of reuse projects increase. The DEM is looking at the experiences of other states and to other state agencies that might be involved with a reuse project (i.e. the DPH). As use determines quality, practical uses for reuse must be assessed and then the water quality criteria can be designed. He mentioned the projects that the DEM has dealt with (the two above and another project that permits a power plant in ~~Burroughville~~ Burrillville to truck wastewater on an as needed basis). The DEM hopes to complete the guidance document within the next few months and ~~then~~ invite relevant agencies and stakeholders ~~will be invited~~ to review the guidelines and to discuss responsibilities.

IV. GENERAL DISCUSSION PERIOD

The following items were discussed after the presentations:

- The proximity of the Wannamoisett Country Club to the new Bucklin Point treatment plant.
- The proximity of the Point Judith Country Club to the South Kingston Treatment Plant. (An Operator at the WWTF mentioned a history of member opposition and permitting as obstacles)
- The grassland at Narragansett and Scarborough Beach which are approximately 100 yards from the effluent line.
- The possibility of exploring a sludge to fertilizer program.
- Potential projects, for either cooling or golf course irrigation, at Quonset Point.

- The need for a marketing study to determine demand for treated wastewater and the savings potential.
- Potential sites for demonstration projects (i.e. State Parks, a golf course, nurseries, etc.).
- Potential organizations that might sponsor a demonstration project are Save the Bay and/or RIDEM

V. ADJOURNMENT:

The meeting adjourned at 4:00 PM.

Respectfully submitted,

Juan Mariscal
Narragansett Bay Commission

**Note: For more information on Water Allocation, visit: http://www.seagrant.gso.uri.edu/scc/wrb/index.html.*

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